Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-4. (Canceled)

5. (Currently amended) A method for switching between two different network access technologies on a networked hardware platform without interrupting an active network application, the platform sending outgoing data packets and receiving incoming data packets for the network application through one of at least two network adapters, the network adapters providing accesses to the network hardware platform for executing the network application, the method comprising the steps of:

providing a network access arbitrator having a virtual anchor adapter driver;

assigning a network adapter, wherein the network adapter is based on a first data link layer network access technology as a primary network adapter;

detecting a change in a network access technology currently in use by the platform from the first network access technology to a second data link layer network access technology;

detecting an active network adapter, wherein the active network adapter is based on the second data link layer network access technology; and

configuring, by the network access arbitrator, the data packets generated by the active network application to continue the network application when the access to the network hardware platform is switched from the primary network adapter to the active network adapter driver,

wherein the network application detects only the network arbitrator when accessing the networked hardware platform.

6. (Original) The method of claim 5 wherein the step of assigning further

includes the step of initially configuring the virtual anchor adapter driver as the network adapter driver associated with the primary network adapter.

7. (Original) The method of claim 5 wherein the step of configuring further includes the steps of:

changing a source hardware address of a data packet for the outgoing information to a data link layer address of the active network adapter; and

modifying a destination hardware address of a data packet for the incoming information to that of the primary network adapter driver.

8. (Original) The method of claim 5 wherein the step of detecting further includes a step of receiving information from at least one network adapter about connection or disconnection status of the network adapter and its adapter driver.

9. (Original) The method of claim 8 further comprising the steps of:

providing a timer to trigger a timed event; and

determining whether at least one adapter receives or sends data packets during two consecutive timed events.

10. (Original) The method of claim 5 wherein the step of detecting further includes the step of detecting whether the primary network adapter is active.

11. (Currently amended) A method for switching from a first data link layer network access technology to a second data link layer network access technology on a networked hardware platform without interrupting an active network application using a network access arbitrator, the active network application sending outgoing information and receiving incoming information in data packets through the networked hardware platform, the first data link layer network access technology using a first network adapter driver and the second data link layer network access technology using a

second network adapter driver, the method comprising the steps of:

utilizing the first data link layer network access technology for executing the active network application; and

selecting the second data link layer network access technology for continuing the active network application without interrupting the network application through a network access arbitrator by arbitrating between the first network adapter driver and the second network adapter driver for sending the outgoing information and receiving the incoming information.

12. (Original) The method of claim 11 wherein the network access arbitrator has a virtual anchor adapter driver that is visible to the active network application.

13. (Original) The method of claim 12 wherein the step of utilizing further includes the steps of:

selecting the first network adapter as a primary network adapter; and

configuring the anchor adapter driver to be associated with the first network adapter.

14. (Original) The method of claim 11 wherein the step of selecting further includes the steps of:

detecting when the second network adapter driver is active; and

modifying a source hardware address of a data packet for the outgoing information to be a data link layer address of the second network adapter driver; and

modifying a destination hardware address of a data packet for the incoming information to be a data link layer address of the first network adapter driver.

15. (Original) The method of claim 14 wherein the step of detecting further includes a step of receiving information from the second network adapter about connection or disconnection status of the second network adapter.

16. (Original) The method of claim 15 wherein the step of receiving further includes the steps of:

providing a timer to trigger a timed event; and

determining whether the second adapter receives or sends data packets during two consecutive timed events.

17. (Currently amended) A system for switching between two different data link layer network access technologies on a networked hardware platform without interrupting an active network application, the platform sending outgoing data packets and receiving incoming data packets for the network application through at least two network adapters, the network adapters providing access to the network hardware platform for executing the network application, the system comprising:

means for assigning a network adapter based on a first data link layer network access technology as a primary network adapter;

means for detecting an active network adapter based on a second data link layer network access technology; and

a network access arbitrator having a virtual anchor adapter driver for configuring the data packets generated by the active network application to continue the network application when access to the network hardware platform is switched from the primary network adapter to the active network adapter driver;

wherein the network application detects only the network arbitrator for accessing the networked hardware platform.

18. (Original) The system of claim 17 wherein the means for assigning further includes means for configuring the virtual anchor adapter driver initially as the network adapter driver associated with the primary network adapter.

19. (Original) The system of claim 17 wherein the network access arbitrator

further includes:

means for changing a source hardware address of a data packet for the outgoing information to a data link layer address of the active network adapter; and

means for modifying a destination hardware address of a data packet for the incoming information to that of the primary network adapter driver.

20. (Original) The system of claim 17 wherein the means for detecting further includes a means for receiving information from at least one network adapter about connection or disconnection status of the network adapter and its adapter driver.

21. (Original) The system of claim 20 further comprising the steps of:

providing a timer to trigger a timed event; and

determining whether at least one adapter receives or sends data packets during two consecutive timed events.

22. (Original) The system of claim 17 wherein the step of detecting further includes the step of detecting whether the primary network adapter is active.

23. (Currently amended) A computer program for switching between two different data link layer network access technologies on a networked hardware platform without interrupting an active network application, the networked hardware platform sending and receiving information in a data packet form, said computer program comprising:

instructions for determining an active network adapter implementing a first data link layer network access technology by monitoring packet traffic and hardware status of one or more network adapters implementing one or more data link layer network access technologies and available on the networked hardware platform; and

instructions for dynamically engaging the active network adapter by a network access arbitrator to process at least one data packet,

wherein the engagement of the active network adapter is invisible to the active network application and wherein a plurality of data packets are sent by the networked hardware platform over a network via the active network adapter.

24. (Original) The program of claim 23 wherein the network access arbitrator defines a virtual anchor adaptor driver that is known as the only adapter driver to the network application regardless of the existence of other actual adapter drivers available in the networked hardware platform.

25. (Original) The program of claim 24 further comprises:

instructions for assigning a predetermined network adapter as a primary network adapter for providing the network access; and

instructions for initially setting the virtual anchor adaptor driver as the network adapter driver associated with the primary network adapter.

26. (Original) The program of claim 25 further comprises:

instructions for changing a hardware destination address of an incoming data packet to a data link layer address of the primary network adapter; and

instructions for changing a source hardware address of an outgoing data packet to a data link layer address of the active network adapter.

27. (Previously presented) A method for switching between at least first and second network adapters using first and second Open Systems Interconnect 7-Layer (OSI-7) network access technologies, respectively, the method comprising:

determining whether the first or second network access technology is active on the first or second network adapter, respectively, in a physical layer (L1) by monitoring a packet traffic and a hardware status of the first and second network adapters;

receiving a plurality of data packets from at least one application; and

dynamically engaging the active network adapter by a network access arbitrator

disposed between a data link layer (L2) and a network layer (L3) to process at least one of the data packets, wherein the engagement of the active network adapter is transparent to the application if the application is disposed in L3 or higher.

28. (Previously presented) The method of claim 27 wherein the network access arbitrator defines a virtual anchor adaptor driver that is known as the only adapter driver to the network application regardless of the existence of other actual adapter drivers available in the L2 layer.

29. (Previously presented) The method of claim 28 further comprising:

assigning a predetermined network adapter as a primary network adapter for providing network access; and

initially setting the virtual anchor adaptor driver as the network adapter driver associated with the primary network adapter.

30. (Previously presented) The method of claim 29 further comprising :

changing a hardware destination address of an incoming data packet to a data link layer (L2) address of the primary network adapter; and

changing a source hardware address of an outgoing data packet to a data link layer (L2) address of the active network adapter.